Packing and Shipping Arthropod Specimens

Packing and Shipping

- Why does it matter?
- Properly labeled containers
- How to tell females from males
- How to ship adult mosquitoes
- How to ship larval mosquitoes
- Who do you ship them to?

Packing and Shipping

- Proper packing and shipping of arthropod specimens ensures fast accurate identifications.

Packing and Shipping

- What can go wrong??
  - Damaged specimens due to overcrowding
  - Stale specimens -- older ones become brittle
  - Don’t send males mosquitoes or trash bugs
  - Incorrect labels

Packing and Shipping

- Labeling
  - Name of installation
  - Collection site
  - Method of collection
  - Collection date
  - Collector’s name

Packing and Shipping

- Collect specimens from traps as early as possible
- Separate females mosquitoes from males and other trash insects
- Ensure they are not wet before you pack them

Packing and Shipping

- How do you tell males from females?
  - Males have mustaches
  - Males have long palps
  - Culicine females have short palps
  - Watch out for female Anophelines
    - They have long palps

Head of Adult Showing Secondary Sex Characteristics 1

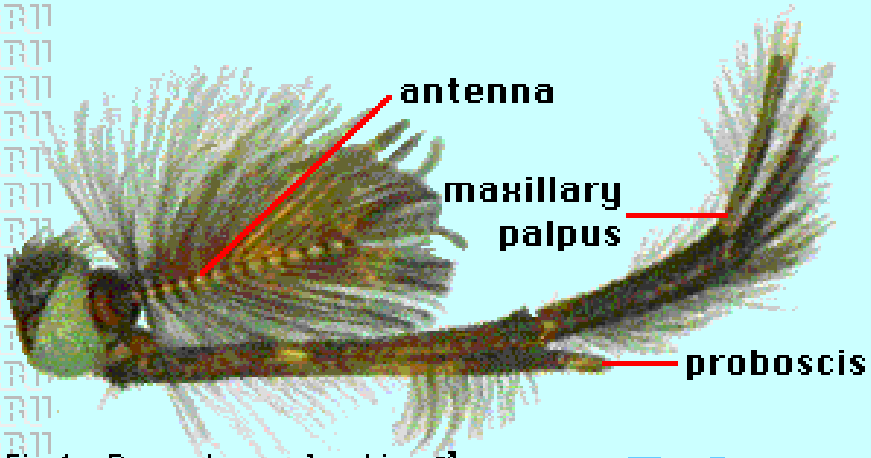


Fig 1. *Psorophora columbiae* ♂

Culicinae

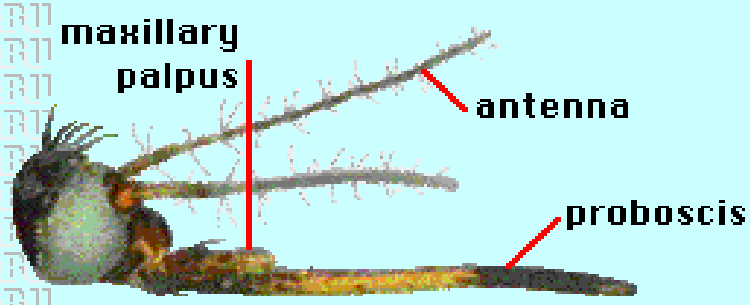


Fig 2. *Psorophora columbiae* ♀

Sex ...

1. specimen is male

2. specimen is female

Head of Adult Showing Secondary Sex Characteristics 2

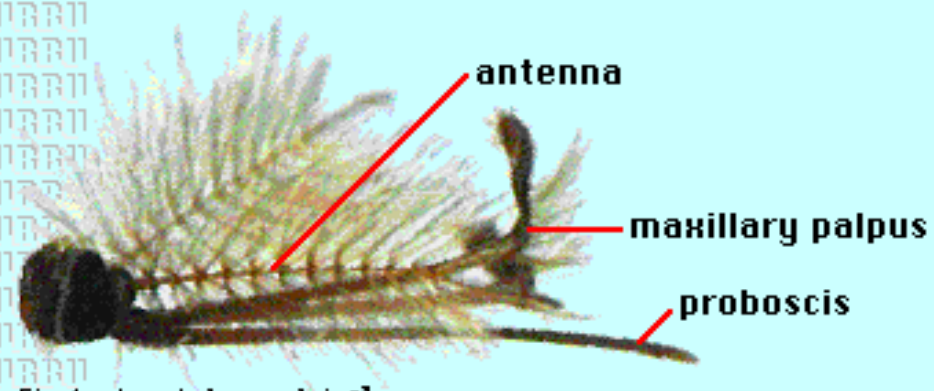


Fig 1. *Anopheles earlei* ♂

Anophelinae

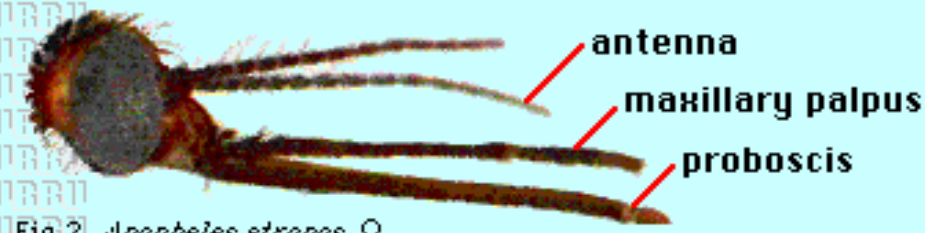


Fig 2. *Anopheles atropos* ♀

Sex...

1. specimen is male

2. specimen is female

Head of Adult Female

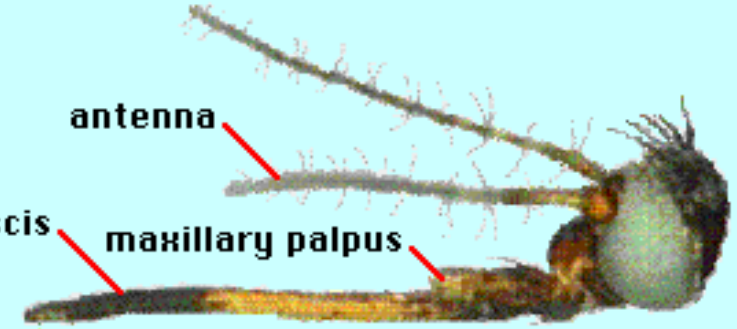


Fig. 1. *Psorophora columbiae*

Culicinae

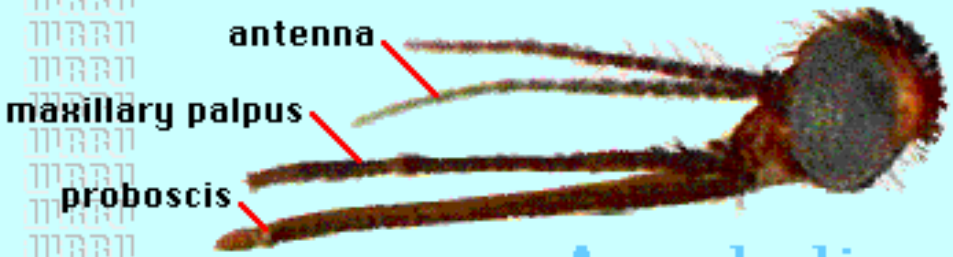


Fig. 2. *Anopheles atropos*

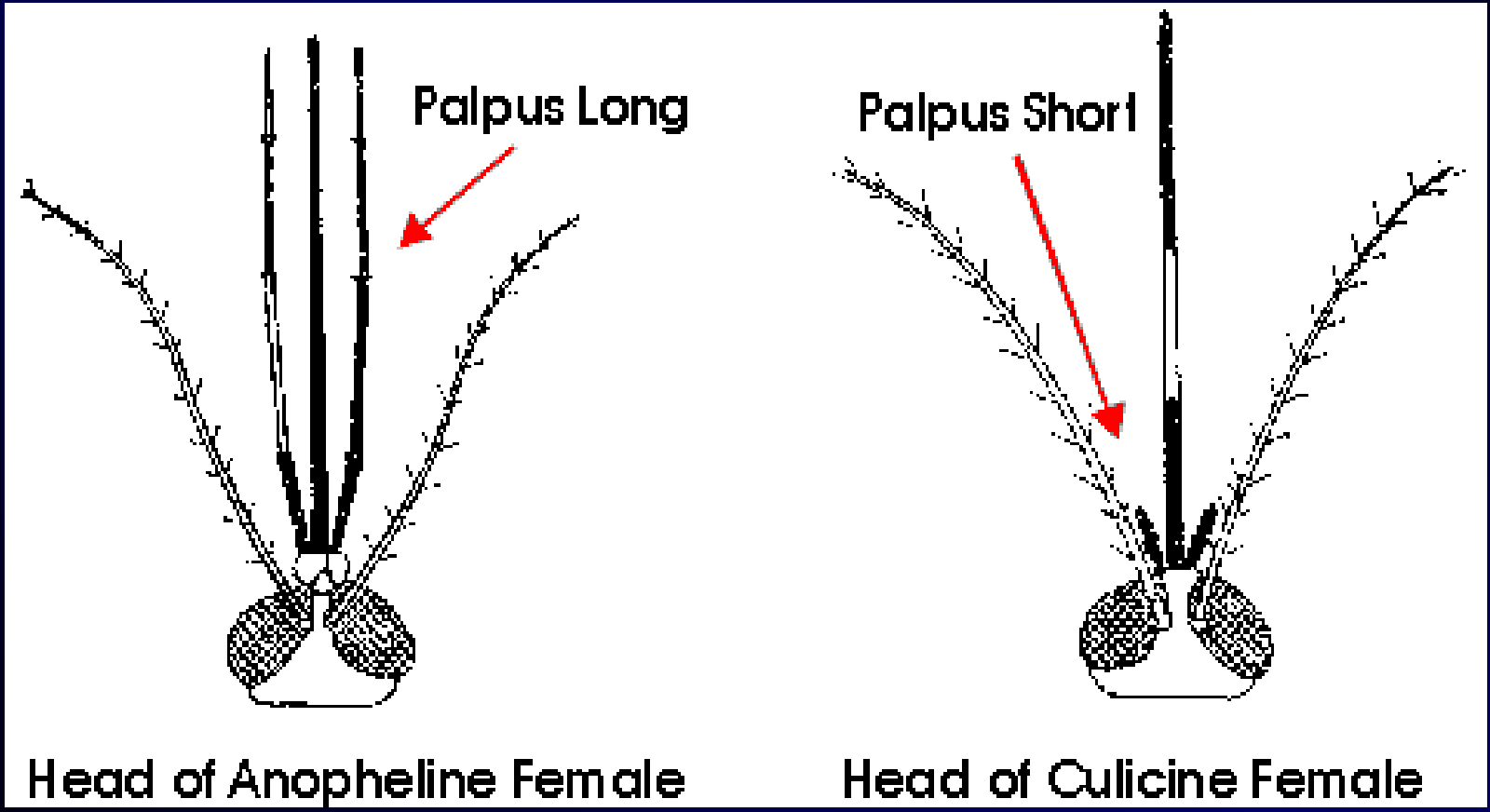
Anophelinae

Maxillary palpus of female…

1. much less than half the length of either the antenna or proboscis

2. as long or longer than antenna; more than half the length of the proboscis

Packing and Shipping

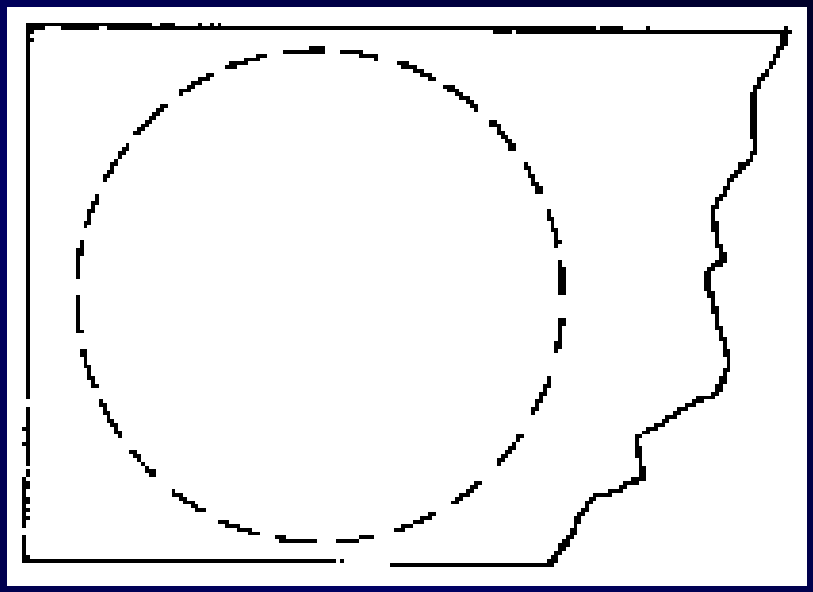


Packing and Shipping

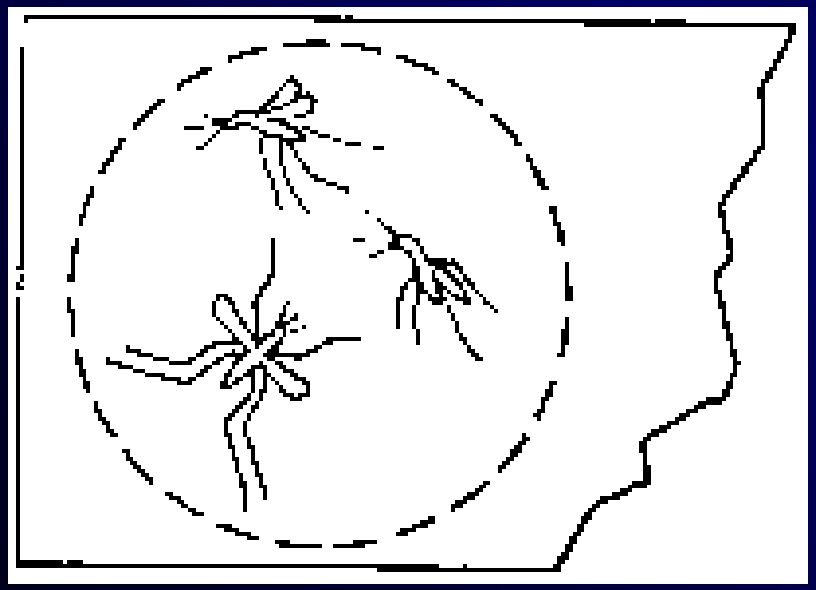
- Items needed to properly pack adult female mosquito specimens
  - Tissues
  - Petri dishes
  - Tape
  - Labels

Packing and Shipping

- Place tissue on bottom half of petri dish

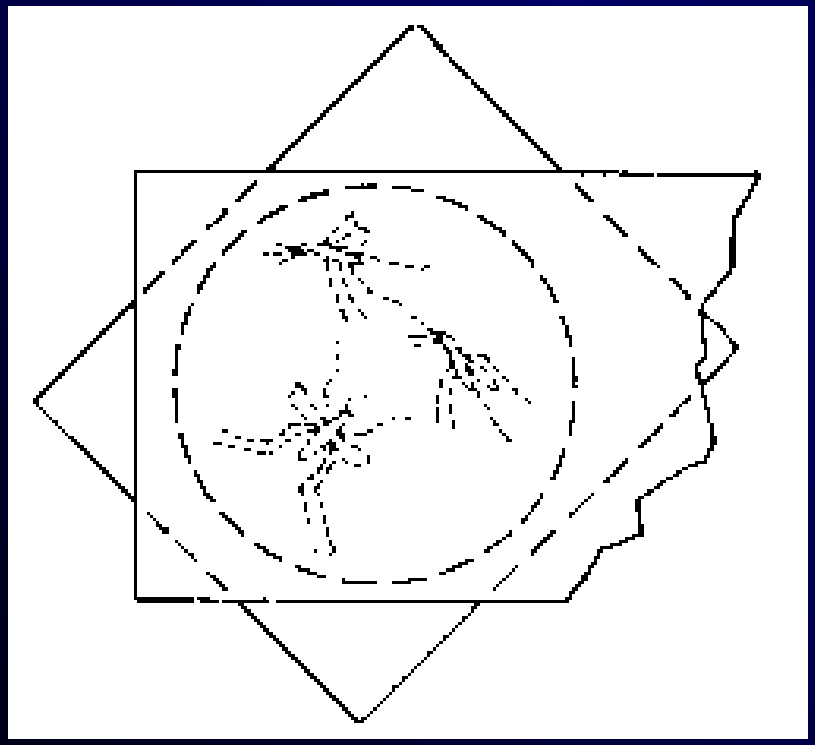


Packing and Shipping



- Put female mosquitoes on tissue paper without allowing them to touch

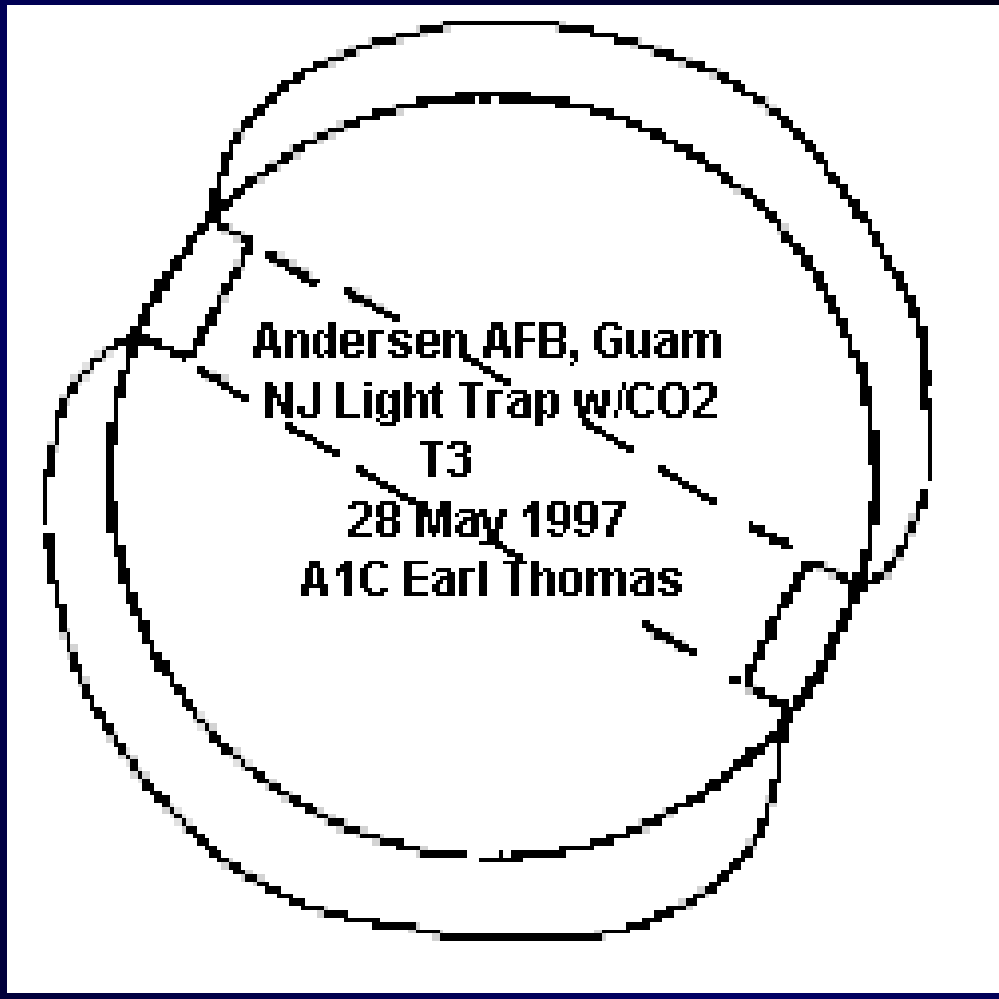
Packing and Shipping



- Place another tissue on the mosquitoes

Packing and Shipping

- Squeeze petri dish lid on the bottom
- Cut excess tissue paper
- Tape petri dish closed and add label



Packing and Shipping

- Items needed to properly pack larval mosquito specimens
  - Alcohol
  - Vials
  - Tape
  - Labels

Packing and Shipping

- Heat water to kill mosquito larva in
  - Hot but not boiling
- Place larvae in hot water
- Remove larvae after a few seconds
- Place larvae in 70-80% alcohol
- Tape lid securely and add label

Packing and Shipping

- Who do you ship them to?

  IERA/RSRH (Attn: Dr McHugh)
  2513 Kennedy Circle
  Brooks AFB TX 78235-5123

  DSN: 240-6135

Summary

- Why does it matter?
- Properly labeled containers
- How to tell females from males
- How to ship adult mosquitoes
- How to ship larval mosquitoes
- Who do you ship them to?

Packing and Shipping

Questions?